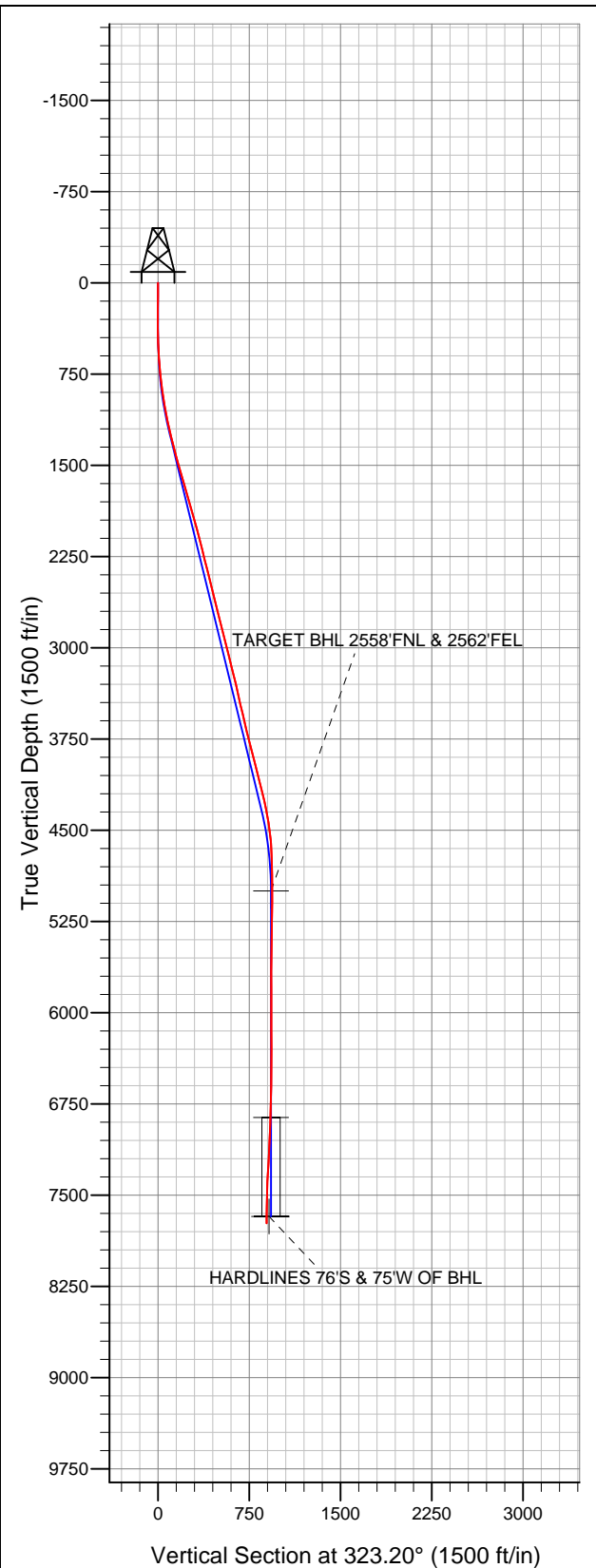


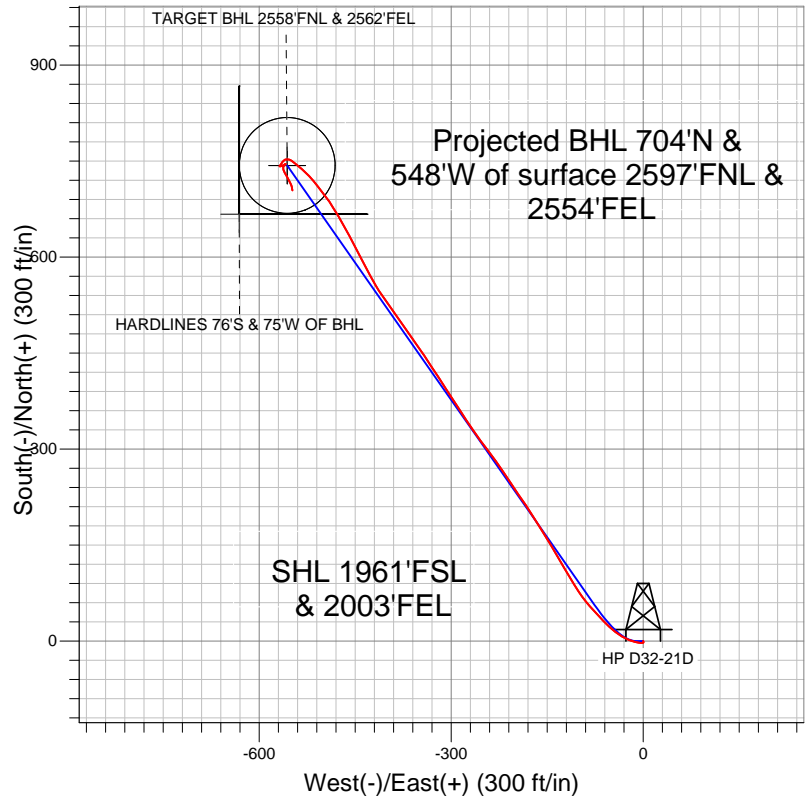
Well Name: HP D32-21D

Surface Location: HP D32-21D Pad Sec.32-T3N-R64W
 North American Datum 1983 US State Plane 1983Colorado Northern Zone
 Ground Elevation: 4854.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1309738.04	3259029.30	40.179910	-104.572940	
		Original Well Elev	WELL @ 4867.0ft (Original Well Elev)			



NOBLE ENERGY INC WELD COUNTY CO



- LEGEND
- Wellbore #1
 - HP D32-21D, Wellbore #1, Noble HP D32-21D Plan #2 (3-14-12) V0
 - Survey #1

Final Survey Plot

Projected Final Survey -
 7845'MD & 7732'TVD @ 891'VS
 0.80 deg Inc 164.40 deg AZ

Project: SEC.32-T3N-R64W
 Site: HP D32-21D Pad Sec.32-T3N-R64W
 Well: HP D32-21D
 Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.32-T3N-R64W

HP D32-21D Pad Sec.32-T3N-R64W

HP D32-21D

Wellbore #1

Survey: Survey #1

Standard Survey Report

23 April, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well HP D32-21D
Project:	SEC.32-T3N-R64W	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Well:	HP D32-21D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.32-T3N-R64W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	HP D32-21D Pad Sec.32-T3N-R64W		
Site Position:		Northing:	1,309,738.06ft
From:	Lat/Long	Easting:	3,259,029.30ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.179910
		Longitude:	-104.572940
		Grid Convergence:	0.60 °

Well	HP D32-21D		
Well Position	+N/-S	0.0 ft	Northing: 1,309,738.04 ft
	+E/-W	0.0 ft	Easting: 3,259,029.30 ft
Position Uncertainty	0.0 ft		Wellhead Elevation: ft
			Latitude: 40.179910
			Longitude: -104.572940
			Ground Level: 4,854.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/5/2012	8.63	66.88	52,951

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	5,000.0	0.0	0.0	323.20	

Survey Program	Date	4/23/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
111.0	7,845.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
111.0	0.70	143.10	111.0	-0.5	0.4	-0.7	0.63	0.63	0.00	
206.0	0.60	168.90	206.0	-1.5	0.9	-1.7	0.32	-0.11	27.16	
301.0	1.10	243.80	301.0	-2.4	0.1	-2.0	1.17	0.53	78.84	
396.0	1.40	265.10	396.0	-2.9	-1.8	-1.2	0.58	0.32	22.42	
490.0	2.60	278.80	489.9	-2.7	-5.1	0.9	1.37	1.28	14.57	
585.0	4.00	281.60	584.7	-1.7	-10.5	4.9	1.48	1.47	2.95	
680.0	6.00	289.20	679.4	0.6	-18.4	11.5	2.21	2.11	8.00	
774.0	7.70	297.40	772.7	5.2	-28.6	21.3	2.08	1.81	8.72	
849.0	7.70	302.20	847.0	10.1	-37.4	30.5	0.86	0.00	6.40	
931.0	7.70	310.30	928.3	16.6	-46.2	41.0	1.32	0.00	9.88	
1,013.0	9.80	313.80	1,009.3	25.0	-55.4	53.2	2.64	2.56	4.27	
1,094.0	11.60	317.00	1,088.9	35.7	-65.9	68.1	2.34	2.22	3.95	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well HP D32-21D
Project:	SEC.32-T3N-R64W	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Well:	HP D32-21D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,176.0	12.40	317.30	1,169.1	48.2	-77.5	85.1	0.98	0.98	0.37	
1,258.0	13.50	320.80	1,249.0	62.1	-89.6	103.4	1.65	1.34	4.27	
1,339.0	13.90	327.80	1,327.7	77.7	-100.7	122.5	2.10	0.49	8.64	
1,421.0	15.20	327.70	1,407.1	95.1	-111.7	143.1	1.59	1.59	-0.12	
1,503.0	15.90	330.80	1,486.1	114.0	-122.9	164.9	1.32	0.85	3.78	
1,585.0	16.50	328.40	1,564.9	133.7	-134.5	187.7	1.10	0.73	-2.93	
1,667.0	16.10	330.10	1,643.6	153.5	-146.3	210.5	0.76	-0.49	2.07	
1,749.0	16.70	327.10	1,722.2	173.2	-158.4	233.6	1.27	0.73	-3.66	
1,830.0	16.30	328.40	1,799.9	192.7	-170.6	256.5	0.67	-0.49	1.60	
1,912.0	15.90	325.60	1,878.7	211.8	-183.0	279.2	1.07	-0.49	-3.41	
1,994.0	15.40	325.90	1,957.6	230.0	-195.5	301.3	0.62	-0.61	0.37	
2,076.0	14.70	326.60	2,036.8	247.8	-207.3	322.6	0.88	-0.85	0.85	
2,158.0	14.00	325.70	2,116.3	264.6	-218.6	342.9	0.90	-0.85	-1.10	
2,239.0	14.10	325.20	2,194.8	280.8	-229.8	362.5	0.19	0.12	-0.62	
2,321.0	14.30	322.60	2,274.3	297.1	-241.6	382.6	0.82	0.24	-3.17	
2,403.0	14.00	322.90	2,353.8	313.0	-253.7	402.7	0.38	-0.37	0.37	
2,484.0	13.80	326.10	2,432.5	328.9	-265.0	422.1	0.98	-0.25	3.95	
2,566.0	14.10	326.30	2,512.1	345.3	-276.0	441.8	0.37	0.37	0.24	
2,648.0	14.10	327.30	2,591.6	362.0	-287.0	461.8	0.30	0.00	1.22	
2,730.0	14.50	326.80	2,671.0	379.0	-298.0	482.0	0.51	0.49	-0.61	
2,811.0	13.50	325.90	2,749.6	395.3	-308.9	501.6	1.26	-1.23	-1.11	
2,893.0	14.20	328.40	2,829.3	411.8	-319.5	521.1	1.12	0.85	3.05	
2,975.0	14.40	326.30	2,908.7	428.9	-330.4	541.3	0.68	0.24	-2.56	
3,057.0	14.10	325.90	2,988.2	445.6	-341.7	561.5	0.39	-0.37	-0.49	
3,139.0	14.40	325.40	3,067.7	462.3	-353.1	581.7	0.40	0.37	-0.61	
3,220.0	13.60	324.30	3,146.3	478.3	-364.3	601.2	1.04	-0.99	-1.36	
3,302.0	13.70	324.70	3,225.9	494.1	-375.6	620.6	0.17	0.12	0.49	
3,384.0	13.70	325.90	3,305.6	510.0	-386.6	640.0	0.35	0.00	1.46	
3,466.0	12.80	323.60	3,385.4	525.4	-397.5	658.8	1.27	-1.10	-2.80	
3,548.0	12.80	325.60	3,465.4	540.2	-408.0	676.9	0.54	0.00	2.44	
3,629.0	13.50	330.00	3,544.3	555.8	-417.8	695.3	1.51	0.86	5.43	
3,711.0	13.40	331.00	3,624.0	572.4	-427.2	714.2	0.31	-0.12	1.22	
3,793.0	14.00	332.20	3,703.7	589.5	-436.4	733.4	0.81	0.73	1.46	
3,875.0	13.80	332.80	3,783.3	606.9	-445.5	752.9	0.30	-0.24	0.73	
3,956.0	14.20	334.40	3,861.9	624.5	-454.2	772.1	0.69	0.49	1.98	
4,038.0	15.00	329.40	3,941.2	642.7	-464.0	792.5	1.82	0.98	-6.10	
4,120.0	14.90	329.40	4,020.5	660.9	-474.7	813.6	0.12	-0.12	0.00	
4,202.0	13.80	330.00	4,099.9	678.4	-485.0	833.8	1.35	-1.34	0.73	
4,283.0	13.60	322.40	4,178.6	694.3	-495.6	852.9	2.23	-0.25	-9.38	
4,365.0	13.40	321.50	4,258.3	709.4	-507.4	872.0	0.35	-0.24	-1.10	
4,447.0	11.20	320.10	4,338.5	723.0	-518.5	889.5	2.71	-2.68	-1.71	
4,529.0	9.40	310.40	4,419.1	733.4	-528.7	904.0	3.04	-2.20	-11.83	
4,611.0	7.30	311.10	4,500.3	741.2	-537.7	915.6	2.56	-2.56	0.85	
4,692.0	6.30	308.50	4,580.7	747.3	-545.0	924.9	1.29	-1.23	-3.21	
4,774.0	4.10	299.50	4,662.3	751.6	-551.1	931.9	2.85	-2.68	-10.98	
4,856.0	3.30	266.00	4,744.2	752.9	-556.0	935.9	2.76	-0.98	-40.85	
4,938.0	2.00	241.20	4,826.1	752.0	-559.6	937.4	2.08	-1.59	-30.24	
5,101.0	1.80	211.10	4,989.0	748.4	-563.4	936.8	0.62	-0.12	-18.47	
5,112.0	1.83	212.01	5,000.0	748.1	-563.6	936.7	0.39	0.28	8.30	
TARGET BHL 2558'FNL & 2562'FEL										
5,265.0	2.30	222.00	5,152.9	743.8	-567.0	935.2	0.39	0.31	6.53	
5,429.0	1.70	75.10	5,316.9	742.0	-566.8	933.7	2.34	-0.37	-89.57	
5,592.0	1.00	64.40	5,479.8	743.2	-563.2	932.5	0.45	-0.43	-6.56	
5,755.0	0.80	69.30	5,642.8	744.2	-560.9	931.9	0.13	-0.12	3.01	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well HP D32-21D
Project:	SEC.32-T3N-R64W	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Well:	HP D32-21D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,919.0	0.50	73.50	5,806.8	744.8	-559.1	931.3	0.19	-0.18	2.56
6,082.0	0.10	38.20	5,969.8	745.1	-558.3	931.1	0.26	-0.25	-21.66
6,246.0	0.20	304.30	6,133.8	745.4	-558.5	931.4	0.14	0.06	-57.26
6,409.0	0.50	235.70	6,296.8	745.2	-559.3	931.7	0.29	0.18	-42.09
6,573.0	1.10	214.80	6,460.8	743.5	-560.8	931.3	0.40	0.37	-12.74
6,736.0	1.30	198.50	6,623.7	740.4	-562.3	929.7	0.24	0.12	-10.00
6,900.0	1.50	159.80	6,787.7	736.7	-562.1	926.6	0.58	0.12	-23.60
6,974.2	1.81	154.79	6,861.8	734.7	-561.3	924.5	0.46	0.42	-6.75
TARGET CIRCLE 2558'FNL & 2562'FEL									
7,063.0	2.20	150.70	6,950.6	731.9	-559.9	921.5	0.46	0.44	-4.60
7,227.0	3.20	150.50	7,114.4	725.2	-556.1	913.8	0.61	0.61	-0.12
7,390.0	3.80	154.40	7,277.1	716.4	-551.5	904.0	0.40	0.37	2.39
7,554.0	1.30	173.30	7,440.9	709.6	-548.9	897.0	1.59	-1.52	11.52
7,717.0	1.10	164.50	7,603.9	706.3	-548.3	894.0	0.17	-0.12	-5.40
7,789.3	0.84	164.42	7,676.2	705.1	-548.0	892.8	0.37	-0.37	-0.12
HARDLINES 76'S & 75'W OF BHL									
7,799.0	0.80	164.40	7,685.9	705.0	-547.9	892.7	0.37	-0.37	-0.16
7,845.0	0.80	164.40	7,731.9	704.4	-547.8	892.1	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____